



# **OUTPATIENT PHARMACY (OP)**

## **TECHNICAL MANUAL/SECURITY GUIDE**

Version 7.0  
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## Revision History

Any changes subsequent to the initial release of this manual are listed below. The users should update the manual with the pages listed under the Revised Pages column.

Date	Revised Pages	Patch Number	Description
10/2002	Title, i – iv, 63-72	PSO*7*111	Updated the Title Page, Revision History Page, and Table of Contents pages. Added Appendix B for the new HL7 Messaging with an External System. Included Index due to the page numbers changing. Included pages for double-sided copying.
11/2001	i (ii), 1 (2), 3 (4), 13 (14), 15 (16), 29 (30), (35) 36, 39 (40), 41 (42)	PSO*7*71          PSO*7*80	Added changes related to OP Medication Copay/MillBill. p. i. Updated Revision History page. p. 1. Introduction section revised. p. 3. Orientation - added Copay Release Notes to list of related manuals. p. 13. Routine List - added four new routines. p. 15. Exported Options - added new security key and description. p. 29. External Relations - updated list of other software needed. p. 36. Software Product Security - added new security key and description. p. 39. Outpatient Pharmacy Supervisor Menu Diagrams – revised Copay Menu options and (p. 41) added new Free Text Dosage Report. (Pages in parentheses were not changed but included in this Release Notes document for two-sided copying.)
09/2001	All		Complete revision. Added Revision History Page. Re-formatted the entire manual to meet national and local documentation standards. Added HL7 web address to External Interfaces section. (Sec. 9) Noted that the PSOA PURGE key and Purge options under Archiving are out of order until further notice (Sec. 6.2, 7, and 14. 6). Updated contents to include changes due to previously undocumented patch releases and the Pharmacy Ordering Enhancements (POE) project patch PSO*7*46.
12/97			Original release of V. 7.0 Technical Manual.

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## Appendix B:

# HL7 Messaging with an External System

### New Protocol

A new protocol, PSO RECEIVE ORDER, is exported for processing orders from an external system. To use this functionality, this protocol must be added as a SUBSCRIBER to the Event Driver protocol in the PROTOCOL file (#101), which sends the external order message.

### New Application Parameter

A new HL7 application parameter, PSO RECEIVE, is exported as the Receiving Application of the PSO RECEIVE ORDER protocol from the HL7 APPLICATION PARAMETER file (#771).

### New Logical Link

A new HL7 logical link, PSO LLPO from the HL7 LOGICAL LINK file (#870), is being exported as the Logical Link of the PSO RECEIVE ORDER protocol. This link information will need to be edited to match the communication method of the interface if this interface is activated.

For any orders received from an external source, two new fields are stored with the Outpatient Pending Order and with the prescription, once the Pending Order is finished. These fields are EXTERNAL PLACER ORDER NUMBER field (#114) and EXTERNAL APPLICATION field (#116) in the PENDING OUTPATIENT ORDERS file (#52.41). These fields are also within the PRESCRIPTION file (#52) and are the EXTERNAL PLACER ORDER NUMBER field (#123) and EXTERNAL APPLICATION field (#124).

Any external systems that send orders through this interface to VISTA must comply with having **unique** external placer order numbers within the orders from this system. This number is used for various look-ups within the interface, in conjunction with the EXTERNAL APPLICATION field (#116) in the PENDING OUTPATIENT ORDERS file (#52.41) and the EXTERNAL APPLICATION field (#124) in the PRESCRIPTION file (#52).

## HL7 Order Message Segment Definition Table

When the PSO RECEIVE ORDER protocol is enabled to process orders from an external system, the following table defines the data elements required for each segment of the incoming order message. This is a unilateral interface. No order information will be returned to the external system.

Segment	Piece	Description/Field Name	Data	Data Type
<b>MSH</b>	1	Field Separator		String
	2	Encoding Characters	^~\&	String
	3	Sending Application	Sending Application Name	String
	4	Sending Facility		String
	5	Receiving Application	PSO RECEIVE	String
	6	Receiving Facility		String
	9	Message Type	ORM^O01	Coded Value
	10	Message Control ID		String
	11	Processing ID	P	Coded Value
	12	Version ID	2.3.1	Coded Value
	15	Accept Acknowledgement	NE	Coded Value
	16	Application Acknowledgement	AL	Coded Value
	17	Country Code	USA	Coded Value
<b>PID</b>	3	Patient (pointer to File #2)	VISTA IEN of Patient from File #2	Composite ID
	5	Patient Name		Person Name
<b>PVI</b>	3	Clinic (pointer to File #44)	VISTA IEN of Hospital Location from File #44	Composite
<b>ORC</b>	1	Order Control Code	'NW'	Coded Value
	2	Placer Order Number*	External Placer Order Number	Composite
	9	Date/Time of Transaction	Current Date/Time	Time Stamp
	10	Entered By	VISTA IEN of Provider from File #200	Composite ID Number and Name
	12	Ordering Provider	VISTA IEN of Provider from File #200	Composite ID Number and Name
	15	Order Effective Date	Current Date/Time	Time Stamp



Segment	Piece	Description/Field Name	Data	Data Type
<b>RXO</b>	10	Dispense Drug	<b>VISTA</b> IEN of Drug from File #50	Coded Element
	11	Quantity	Quantity	Numeric
	13	Number of Refills	Number of Refills	Numeric
<b>NTE</b>	6	Provider's Instructions to Dispensing Pharmacy	Free Text Provider Comments	String
	7	Patient's Instructions	Expanded Sig	String
<b>ZRX</b>	4	Routing	'W' (for Window)	String

\* Field must contain unique data

The PSO RECEIVE ORDER protocol can also receive discontinue order messages. The following table gives the details of the fields that need to be received in the incoming **discontinue** order message.

Segment	Piece	Description/Field Name	Data	Data Type
<b>MSH</b>	1	Field Separator		String
	2	Encoding Characters	^~\&	String
	3	Sending Application	Sending Application Name	String
	4	Sending Facility		String
	5	Receiving Application	PSO RECEIVE	String
	6	Receiving Facility		String
	9	Message Type	ORM^O01	Coded Value
	10	Message Control ID		String
	11	Processing ID	P	Coded Value
	12	Version ID	2.3.1	Coded Value
	15	Accept Acknowledgement	NE	Coded Value
	16	Application Acknowledgement	AL	Coded Value
	16	Country Code	USA	Coded Value
<b>PID</b>	3	Patient (pointer to File #2)	<b>VISTA</b> IEN of Patient from File #2	Composite ID
	5	Patient Name		Person Name
<b>PVI</b>	3	Clinic (pointer to File #44)	<b>VISTA</b> IEN of Hospital Location from File #44	Composite
<b>ORC</b>	1	Order Control Code	'CA'	Coded Value
	2	Placer Order Number*	External Placer Order Number	Composite
	9	Date/Time of Transaction	Current Date/Time	Time Stamp
	10	Entered By	<b>VISTA</b> IEN of Provider from File #200	Composite ID Number and Name
	12	Ordering Provider	<b>VISTA</b> IEN of Provider from File #200	Composite ID Number and Name
	15	Order Effective Date	Current Date/Time	Time Stamp

\* Field must contain unique data

An Application Acknowledgement message is returned for new and discontinue messages received from the external system. Sequence 1 (Acknowledgement Code) of the MSA segment will always be Application Accept (AA), regardless of whether or not the incoming message passed all of the exception checks. Sequence 3 (Text Message) of the MSA segment will be null if the message was accepted and passed all of the exception checks. If the message is rejected by the receiving application, Sequence 3 (Text Message) will contain the reason for the rejection.

Segment	Piece	Description/Field Name	Data	Data Type
<b>MSH</b>	1	Field Separator		String
	2	Encoding Characters	^~\&	String
	3	Sending Application	PSO RECEIVE	String
	4	Sending Facility	(Sending Facility)	String
	5	Receiving Application	(Receiving Application Name)	String
	6	Receiving Facility	(Receiving Facility)	String
	7	Date/time of Message	Current Date/Time	Time Stamp
	9	Message Type	ORR^O01	Coded Value
	10	Message Control ID		String
	11	Processing ID	P	Coded Value
	12	Version ID	2.3.1	Coded Value
	15	Accept Acknowledgement	NE	Coded Value
	16	Application Acknowledgement	NE	Coded Value
	17	Country Code	US	Coded Value
<b>MSA</b>	1	Acknowledgement Code	AA	Coded Value
	2	Message Control ID		String
	3	Text Message	(Null, or Rejection Reason)	String

## Order Messaging Exceptions

Exceptions will occur when **VISTA** rejects a new or discontinue order message. For new order messages, the rejections are largely based on the drug, provider, or patient associated with the prescription order.

### Drug exceptions

- Drug is inactive (less than today's date)
- Drug is not marked for outpatient use
- Drug is not associated with a Pharmacy Orderable Item
- Invalid drug entry

### Provider exceptions

- Provider is not authorized to write med orders
- Provider has an inactive date (date of today or less)
- Provider has a termination date (date of today or less)
- Provider does not hold the PROVIDER key
- Invalid provider entry

### Patient exceptions

- Patient is deceased
- Invalid patient entry

### Other exceptions

- Invalid NTE segment, greater than 245 characters
- Invalid message structure
- Missing MSH segment
- Missing PID segment
- Missing PVI segment
- Missing ORC segment
- Missing RXO segment
- External order, unable to successfully transmit to CPRS
- Unable to derive Institution from Clinic
- Unable to add order to Pending file
- Missing sending application name
- Invalid Order Control Code
- No Patient Location
- Missing CHCS Placer Order Number
- Duplicate order number in Outpatient Pending file
- Duplicate order number in Outpatient Prescription file
- Missing number of refills
- Missing effective date
- Missing Entered by data

For discontinue order messages, these are the possible exceptions:

#### Provider exceptions

- Provider is not authorized to write med orders
- Provider has an inactive date (date of today or less)
- Provider has a termination date (date of today or less)
- Provider does not hold the PROVIDER key
- Invalid provider entry

#### Other exceptions

- Invalid message structure
- Missing MSH segment
- Missing PID segment
- Missing ORC segment
- Missing sending application name
- Missing CHCS Placer Order Number
- Unable to find order in Pharmacy
- Patient mismatch in Pending order
- Pending order is being edited by another user
- Unable to cancel Pending order, status is HOLD
- Unable to cancel Pending order, status is RENEW
- Unable to cancel Pending order, status is DISCONTINUE (EDIT)
- Unable to cancel Pending order, status is DISCONTINUE
- Unable to cancel Pending order, status is REFILL REQUEST
- Patient mismatch in prescription
- Prescription is being edited by another user
- Unable to cancel prescription, status is DISCONTINUED
- Unable to cancel prescription, status is DELETED
- Unable to cancel prescription, status is DISCONTINUED BY PROVIDER
- Unable to cancel prescription, status is DISCONTINUED (EDIT)

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